

CA20N
EV 530
1972
R282
C.2



Ministry of the ENVIRONMENT



Water Pollution Survey Village of Beachville

1972

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REPORT

ON A

WATER POLLUTION SURVEY

OF THE

VILLAGE OF BEACHVILLE

COUNTY OF OXFORD

1972



DISTRICT ENGINEERS SECTION

WATER SUPPLY AND POLLUTION CONTROL DIVISION

MINISTRY OF THE ENVIRONMENT

REPORT

INTRODUCTION

A water pollution survey of the Village of Beachville was conducted by Ministry staff on February 15, March 1 and August 21, 1972. Mr. J. J. Nadalin, Reeve for the Village of Beachville and Mr. R. MacDonald, Project Supervisor with the Department of Transport and Communications, which was involved in an August storm sewer and road construction project in Beachville, provided information pertinent to the survey.

GENERAL

The Village of Beachville, with an assessed population of 998 (1972 Municipal Directory) is located at the junction of County Road 6 and Highway No. 2 in the central section of Oxford County. Municipal assessment is mainly residential and commercial with some light industry.

The village is situated on both banks of the Thames River. Drainage waters from the village area flow via municipal drains, storm sewers and private drains into tributaries which lie within the Thames River watershed.

The water pollution survey, as conducted, consisted of locating and sampling small creeks, municipal surface water drains and subsurface drains which contained significant flows, to determine the level of pollution being discharged into the Thames River from the village area.

At present, the Village of Beachville does not have an official plan of its own or a secondary plan under the Oxford County Official Plan. To encourage an interest in planning and hopefully curtail the present trend to uncontrolled and strip developments, Appendix I has been included on the need for local planning.

The appendices to this report also include the laboratory analyses results, a section on the implementation of water and sewage works programmes, a map showing the location of the sampling points and an interpretation of the analyses results.

WATER SUPPLY

A municipally-owned water works is maintained for the Loweville Subdivision and supplies water to about 40 residences. The remainder of the village is served by individual wells which, municipal officials have reported, are providing an adequate supply of water and have a satisfactory water quality.

SEWAGE DISPOSAL

The treatment and disposal of domestic wastes is effected entirely by private septic tank and tile bed systems. The Oxford Health Unit supervises the installation and operation of these systems.

INDUSTRIAL WASTES

Wm. Neilson Limited is the only industry that discharges industrial wastes within the village limits. The milk processing

wastes are treated by an activated sludge treatment plant prior to discharge into the Thames River. The Ministry's Industrial Wastes Branch examines the treatment plant and checks the quality of the discharge once per month.

WATER POLLUTION

Surface Water Drainage

A total of 26 sampling points on 20 drains and watercourses were examined for water quality. The results of the analysis of these samples are listed on the appended sheets 1B - 5B.

A perusal of these results indicated that 21 sampling points had high concentrations of biochemical oxygen demand or suspended solids. Twenty-two of the sampling points had coliform organism counts above Ministry objectives of 1,000 coliforms per 100 ml of sample.

Anionic detergent concentrations (MBAS as LAS) were found in 1 of 4 points tested. This single result was 305 ppm indicating a direct wastewater discharge to a surface drain (TT 155.72).

The above-noted constituents are indicative of sanitary sewage and domestic wastes.

SUMMARY

Based on the observations and findings of this survey, it is evident that domestic wastes and sanitary sewage are gaining access to municipal surface water drains.

These wastes are being discharged from residential and commercial properties on which satisfactory private sewage treatment is not being provided. The practice of discharging inadequately treated effluents from septic tanks, and polluting materials from any sources, into a surface-water drain or water-course constitutes a violation of Section 32, subsection(1) of the Ontario Water Resources Act which states:

"Every municipality or person that discharges or deposits or causes or permits the discharge or deposit of any material of any kind into or in any well, lake, river, pond, spring, stream, reservoir or other water or watercourse or on any shore or bank thereof or into or in any place that may impair the quality of the water of any well, lake, river, pond, spring, stream, reservoir, or other water or watercourse is guilty of an offence and on summary conviction is liable on first conviction to a fine of not more than \$5,000 and on each subsequent conviction to a fine of not more than \$10,000 or to imprisonment for a term of not more than 1 year, or to both such fine and imprisonment".

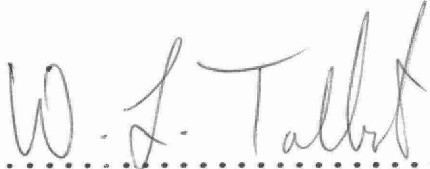
RECOMMENDATIONS

1. A sewerage works programme consisting of the installation of an adequate system for sewage treatment should

be instituted for the Village of Beachville.

In the event that this solution does not prove to be feasible, the municipality should then take positive measures to ensure that all private drains, which discharge inadequately treated sewage into any storm or surface water drain, be located and severed. If, in some instances, there is more than one residence on a private drain, the Village of Beachville should contact the Oxford Health Unit and request their assistance in locating the polluting residence(s).

2. An official plan for the Village of Beachville should be developed in order to curtail the current trend toward uncontrolled and strip development.

Prepared by 
for R. J. Turnbull, Technologist
District Engineers Section
Sanitary Engineering Branch

APPENDIX I

COMMUNITY PLANNING

The need for effective planning has become more important to-day than ever before. Municipalities are being burdened with the rising costs of land and labour. Therefore, any project a community hopes to develop should be based on sound planning. Planning at all levels of government is essential but, community planning can be most effective if interest and initiative is generated at the local level. The enormous benefits accrued as a result of good planning can more than compensate for the initial investment.

Community planning can be described as an effort to control and direct development effectively. This can best be achieved through the development of an official plan. An official plan is the stated intention of the local authorities with respect to orderly development within the planning area, that is prepared and set forth with professional assistance and meets the requirements as set out by the Provincial Planning Act. An official plan can be a joint effort by a number of municipalities which have common basic characteristics and common problems, or one municipality can establish a plan on its own initiative.

Orderly development yields future economy in services. Development in the community can be retarded where an official plan does not exist. A plan provides, among other things, the framework for the rational design of water and sewage works and also the extensions of mains and collector sewer systems.

A local council having decided to proceed with a programme of community planning definitely should contact the Ministry of Treasury, Economics and Intergovernmental Affairs Through its many branches, information and guidance is provided to all interested parties.

APPENDIX II

SIGNIFICANCE OF LABORATORY RESULTS, ABBREVIATIONS AND SYMBOLS

All the laboratory tests included in this report were performed at the Ministry of the Environment Laboratories in London.

A. Bacteriological Examination

TOTAL COLIFORM organisms include a wide variety of bacteria ranging from the genus (group) *Escherichia Coli*, which originate mainly in the intestines of man and other warm blooded animals, to the genera *Citrobacter* and *Enterobacter aerogenes*. The latter genera are basically found in soil but are also present in faeces in small numbers. The presence of total coliforms in water may indicate soil run-off or, more important, less recent faecal pollution since organisms of the *Enterobacter-Citrobacter* groups tend to survive longer in water than do members of the *Escherichia Coli* group, and even to multiply when suitable environmental conditions exist.

The FAECAL COLIFORM organisms are those coliform bacteria which are of intestinal origin and, therefore, are an indicator of faecal pollution. Generally, the higher the number of faecal coliform organisms as compared to the total number of coliform organisms,

the greater the probability that the pollution is of recent origin.

Most of the coliform bacteria found by the faecal coliform test are of the genus *Escherichia Coli*.

The results of the examinations are reported as "MF Coliform Count per 100 ml".

This Ministry's Guidelines and Criteria for Water Quality Management in Ontario (1970) indicate that water used for total body contact recreation can be considered impaired when the total coliform, faecal coliform and/or faecal streptococcus geometric mean density exceeds 1,000, 100 and/or 20 per 100 ml, respectively.

The limiting criteria of 1,000 total coliform organisms is also applied to surface and subsurface drains and watercourses not used for body contact recreation.

NOTE: The term "geometric mean" refers to a type of average. Mathematically speaking, the geometric mean of a set of N numbers is the Nth root of the product of the numbers; in practice, it is computed by the use of logarithms.

B. Biochemical Oxygen Demand (BOD)

Biochemical Oxygen Demand is reported in parts per million (ppm), and is an indication of the amount of oxygen

required for the stabilization of decomposable organic matter in the water. The completion of the laboratory test requires five days under the controlled incubation temperature of 20° C.

BOD directly affects the dissolved oxygen concentrations in a watercourse and consequently must be limited to ensure an oxygen level of at least 5 ppm in a watercourse supporting warm-water biota.

Solids

The value for solids, expressed in parts per million, is the sum of the values for the suspended and the dissolved matter in the water. The concentration of suspended solids is generally the most significant of the solids analyses with regard to surface water quality. The effects of suspended solids in water are reflected in difficulties associated with water purification, decomposition in streams and injury to the habitat of fish. Where suspended solids values are less than 20 ppm, laboratory difficulties are sometimes experienced and the turbidity may be determined instead.

Total Kjeldahl is a measure of the total nitrogenous matter present except that measured as nitrite and nitrate

nitrogens. The Total Kjeldahl less the Ammonia Nitrogen measures the organic nitrogen present. Ammonia and organic nitrogen determinations are important in determining the availability of nitrogen for biological utilization. The normal range for Total Kjeldahl would be 0.1 to 0.5 ppm.

Total Phosphorus is an essential plant nutrient and is believed to play an important role in the deterioration of the quality of natural waterways by promoting an overabundance of plants. It occurs in natural and waste waters in several different chemical combinations which are all eventually used by plants and animals. Agricultural drainage, industrial waste discharges and leaching from minerals in ore are the main sources of phosphorus.

Concentrations greater than 0.01 ppm encourage the growth of algae and zooplankton.

Methylene Blue Active Substances (Anionic Detergents) as
Linear Alkylate Sulphonate

The Linear Alkylate Sulphonate portion of the Methylene Blue Active Substances is reported in ppm. The test is generally employed to indicate the presence of an illegal discharge of waste water to storm drains.

APPENDIX III

IMPLEMENTATION OF WATER AND SEWAGE WORKS PROGRAMMES

Currently, there are three general methods which may be utilized for implementing sewage and water works programmes. These are: (1) to enter into an agreement with the Ministry for the construction of the treatment and collector works with an obligation to pay the debt retirement and operating charges over the term of the agreement with the facility reverting to the municipality at the end of the term of the agreement, (2) by requesting the provision of service from a Provincially-owned project, and (3) by proceeding with the construction independently and meeting capital costs by the sale of debentures.

MINISTRY/MUNICIPAL PROJECTS

For the construction of water and sewage works under agreement with this Ministry, the works are provided and developed under Section 52 to 60 of the Ontario Water Resources Act.

For this type of arrangement, the Ministry utilizes a sinking fund and consequently the annual payments are based on a specific debt retirement period and the payments are unchanged for the period of the agreement. This type of project may be financed over a period of time up to a maximum of thirty years. The annual charges for projects constructed under the agreement are determined as follows:

1. Capital Repayment

As noted, Ministry financing is by the sinking fund method and an annual payment of approximately 2 per cent of the capital cost is required to retire a debt over a thirty year period.

2. Interest

On new Ministry projects, interest is calculated at the current rate.

3. Reserve Fund

To provide money for repairs and replacements, Section 53 of the Ontario Water Resources Act provides for the establishment of a reserve fund by the Ministry. It is important to note that this fund is established in the name of the municipality and the balance consequently earns interest. It has been established that the reserve fund billing for each project shall continue only until the fund reaches an amount of ten times the initial annual billing and the reserve fund billing shall be re-imposed only when the fund has been depleted to 80 per cent or less of the maximum amount.

4. Operating Costs

Under Ministry agreement, the municipality is responsible only for the operating costs directly attributed

to the project in the municipality. Therefore, no charges are made by the Ministry for the services of head office personnel who are available as required to advise on the satisfactory operation and maintenance of the project.

PROVINCIALY-OWNED WORKS

The third method of obtaining new water or sewage works or extensions is known as the Provincial ownership plan. Under this method, the Ministry of the Environment arranges financing and carries out construction and operation. Ownership of the facilities remains with the Province. The municipality then buys treated water or waste treatment as needed on a per gallon basis. The rate for these services is based on cost of construction and operation of the works.

A slight variation of this programme could be implemented in that the municipality may request that this Ministry provide only major water and sewage works facilities as Provincially-owned works, and develop the water distribution and sewage collector systems under the standard type of Ministry project. It would appear that where applicable, it would be more advantageous for the municipality to proceed on the basis of requesting this Ministry to develop entire systems as Provincially-owned works.

The associated cost of supplying these works, including mortization of capital costs, together with operating and maintenance charges, will be recovered by the sale of service to the effected municipalities by rates determined on a usage basis. These facilities will be wholly-owned by the Province of Ontario and the arrangements for service will be formalized by contracts between the Ministry and the municipality concerned. The installation will be operated entirely at cost with appropriate provision for adjustment in rate.

DEVELOPMENT

If a municipality, after considering the alternatives, wishes this Ministry to consider Provincially-financed projects, application forms should be completed and submitted together with a resolution of the municipal council. A draft of the suggested wording of the resolution is included with the application forms.

If the proposed works are to be built by the municipality on its own initiative or as a formal project under agreement with this Ministry, it is required that the council retain a consulting engineer to prepare preliminary engineering reports on the proposed work. If a Provincial system is contemplated, no action should be taken with respect to retaining a consulting engineering firm as the Ministry will designate a consulting engineer to carry out the Provincial portion of the work and it would be advantageous if the municipal portion be studied and reported on by the same engineer.

VILLAGE OF BEACHVILLE
WATER POLLUTION SURVEY

FIELD OBSERVATIONS

SHEET: 1 A

1972

Sampling Point	Description of Sampling Point	Size of Outfall (Inches)	Kind of Outfall	Estimated Flow	Observations	Action	Day and Time of Sampling	Weather during Survey
TC 155.1	Small Creek West of Domtar Chemicals Ltd	-		3 GPM	Clear	Ch-Ba	9:30 AM Aug. 21	80°sunny humid
T 155.25	Thames River at Givens Road	-	-	-	Turbid,Algae growths	Ch-Ba	2:00 PM AUG.21	"
TT 155.72	See Appended map for Diagram	2"	Clay Tile	2 GPM	Purple,white foam	Ch-Ba	10:00 AM AUG.21	"
TD _W 155.72	See Appended map for Diagram	-	Surface Drain	1 GPM	Turbid	Ch-Ba	Feb.15	Spring Thaw
				3 GPM	Turbid	Ch-Ba	Mar. 1	Rain
TD _E 155.72	See Appended map for Diagram	-	Surface Drain	2 GPM	Turbid	Ch-Ba	Feb.15	Spring Thaw
				4 GPM	Turbid	Ch-Ba	Mar. 1	Rain
TC 155.72	See Appended map for Diagram	-	Surface Drain	3 GPM	Clear	Ch-Ba	Feb.15	Spring Tha
				3 GPM	Clear	Ch-Ba	Mar. 1	Rain
				1 GPM	Clear	Ch-Ba	Aug.21	80° sunny
TT _S 155.72	See Appended map for Diagram	6"	Steel Tile	5 GPM	Turbid	Ch-Ba	Feb.15	Spring Thaw

VILLAGE OF BEACHVILLE
WATER POLLUTION SURVEY

SHEET: 2 A

1972

FIELD OBSERVATIONS

Sampling Point	Description of Sampling Point	Size of Outfall (Inches)	Kind of Outfall	Estimated Flow	Observations	Action	Day and Time of Sampling	Weather during Survey
PT _C 155.72	See Appended map for Diagram	3"	Clay Tile	3 GPM	Turbid	Ch-Ba	Feb.15	Spring Thaw
TC _C 155.72	See Appended map for Diagram	-	-	15 GPM	Clear	Ch-Ba	Feb.15	Spring Thaw
				10 GPM	Turbid	Ch-Ba	Mar. 1	Rain
TC-156.0	Small creek at North End of West Hill Rd.	-	-	10 GPM	Clear	Ch-Ba	Feb.15	Spring Thaw
				5 GPM	Clear	Ch-Ba	Aug.21	80° sunny
TP-156.22	Pond South of Lynn Crescent	-	-	10 GPM	Clear	Ch-Ba	Feb.15	Spring Thaw
				10 GPM	Clear	Ch-Ba	Mar. 1	Rain
				5 GPM	Clear with Algae	Ch-Ba	Aug.21	80° sunny
TCB-156.24	North-West Corner of Spruce Road at Lynn Crescent	6"	Concrete	3 GPM	Clear - Foam	Ch-Ba	Feb.15	Spring Thaw
				3 GPM	Clear - Foam	Ch-Ba	Mar. 1	Rain
				1 GPM	Milky - Foam	Ch-Ba	Aug.21	80° sunny
TD-156.24	South-West Corner of Spruce Road at Lynn Crescent	-	Surface drain	1 GPM	Clear	Ch-Ba	Aug.21 10:45 AM	80° sunny
TD.156.27	West Side on North Section of Spruce Rd.	-	Surface Drain	1 GPM	Clear	Ch-Ba	Mar. 1	Rain

VILLAGE OF BEACHVILLE
WATER POLLUTION SURVEY

SHEET: 3 A

1972

FIELD OBSERVATIONS

Sampling Point	Description of Sampling Point	Size of Outfall (Inches)	Kind of Outfall	Estimated Flow	Observations	Action	Day and Time of Sampling	Weather during Survey
CB-156.3	South Side on North East Section of Spruce Road	6"	Concrete	1 GPM	Clear	Ch-Ba	Mar.1	Rain
TC-156.35	Railroad Bridge 200 yd. west of Depot	-	-	5 GPM	Clear	Ch-Ba	Feb.15	Spring Thaw
				3 GPM	Turbid - Algae	Ch-Ba	Aug.21	80° Sunny
TC-156.4	1st Small Creek West of East Zorra Road on Main Street	-	-	10 GPM	Clear	Ch-Ba	Feb.15	Spring Thaw
				5 GPM	Clear	Ch-Ba	Aug.21	80° Sunny
T-156.4	Thames River at East Zorra Road	-	-	-	Turbid	Ch-Ba	Feb. 15	Spring Thaw
					Turbid - Algae	Ch-Ba	Aug.21	80° sunny
TS-156.4	100 Yds. South of Thames River on East Side of East Zorra Road	24"	Corrugated steel	5 GPM	Turbid	Ch-Ba	Feb.15	Spring Thaw
TCB-156.6	North-west corner of Martin Street at Queen Street West	8"	Concrete	5 GPM	Clear	Ch-Ba	Feb.15	Spring Thaw
Tu-156.5	Thames River 10 yards upstream of Neilson Co. Ltd.	-	-	-	Turbid-Algae	Ch-Ba	Aug.21 1:40 PM	80° sunny

FIELD OBSERVATIONS

VILLAGE OF BEACHVILLE
WATER POLLUTION SURVEY

SHEET: 4 A

1972

Sampling Point	Description of Sampling Point	Size of Outfall (Inches)	Kind of Outfall	Estimated Flow	Observations	Action	Day and Time of Sampling	Weather during Survey
TD-156.5	Thames River Downstream of Neilson Co. Ltd.	-	-	-	Turbid-Algae	Ch-Ba	Feb.15	Spring Thaw
TC-157.63	1st Creek West of Commodore Motel at Highway #2	-	-	5 GPM	Clear-Algae	Ch-Ba	Aug.21 11:45 am	80° sunny
T-160.4	Thames River at Governors Road West of Woodstock	-	-	-	Clear-Algae	Ch-Ba	Aug.21 12:40 pm	80° sunny
TD155.56	First Surface Drain West of Vine Road		Depression	Nil	Frozen Over	-	Feb.15	spring thaw
				Nil	Dry	-	Aug.21	80° sunny
TD156.25	First Surface Drain West of Cemetary		Depression	Nil	Frozen Over	-	Feb.15	spring thaw
				Nil	Dry	-	Aug.21	80° sunny
TD156.47	First Surface Drain East of Martin St.		Depression	Nil	Frozen Over	-	Feb.15	Spring thaw
				Nil	Dry	-	Aug.21	80° sunny

FIELD OBSERVATIONSVILLAGE OF BEACHVILLE
WATER POLLUTION SURVEY

SHEET: 5 A

1972

Sampling Point	Description of Sampling Point	Size of Outfall (Inches)	Kind of Outfall	Estimated Flow	Observations	Action	Day and Time of Sampling	Weather during Survey
TD156.75	First Surface Drain East of Church		Depression	Nil	Frozen Over	-	Feb.15	Spring Thaw
				Nil	Dry	-	Aug.21	80° sunny

ANALYSES RESULTS

WATER POLLUTION SURVEY

SHEET: 1-B

1972

Sampling Point	Description of Sampling Point	5-Day BOD (ppm)	Susp. Solids (ppm)	Total Kjeldahl (ppm)	Total Phosphorus (ppm)	Anionic Detergents as LAS	Faecal Coliform Count per 100 ml.	MF Coliform Count per 100 ml.
TC 155.1	Small Creek West of Domtar Chemicals Ltd.	5.5	5	0.6	0.2	-	800	3,500
T 155.25	Thames River at Givens Road	4.6	20	1.0	0.4	-	410	15,000
TT155.72	See Appended Map for Diagram	3,200	1050	6.9	160	305	130,000	19,000,000
TD _W 155.72	See Appended Map for Diagram	2.0	700	4.8	0.7	-	L4	4,000
		24.0	490	2.5	0.9	-	0	5,300
TD _E 155.72	See Appended Map for Diagram	6.0	80	0.4	0.6	-	100	8,000
		17.0	160	1.5	0.4	-	0	7,800
TC155.72	See Appended Map for Diagram	1.8	0	0.2	0.1	-	L4	12
		2.2	0	0.2	0.2	-	0	17,000
		1.8	0	0.4	0.1	-	L4	2,300

ANALYSES RESULTS

VILLAGE OF BEACHVILLE
WATER POLLUTION SURVEY

SHEET: 2 B

1972

Sampling Point	Description of Sampling Point	5-Day BOD (ppm)	Susp. Solids (ppm)	Total Kjeldahl (ppm)	Total Phosphorus (ppm)	Anionic Detergents as LAS	Faecal Coliform Count per 100 ml.	MF Coliform Count per 100 ml.
TT _x 155.72	See Appended Map for Diagram	30.0	490	4.5	3.2	-	Lab Accident	430,000
TT _c 155.72	See Appended Map for Diagram	3.6	85	1.0	0.4	-	0	2,800
TC _c 155.72	See Appended Map for Diagram	2.8	20	0.2	0.3	-	56	1,100
		10.0	120	1.5	0.4	-	0	12,000
TC156.0	Small Creek at North End of West Hill Rd.	19	90	2.0	1.0	-	11,000	1,000,000
		4.4	10	0.8	0.4	-	140	220,000
TP156.22	Pond South of Lynn Crescent	6.0	0	0.6	LO.1	-	8	120
		11.0	5	1.2	0.2	-	0	620
		7.0	50	1.5	0.4	0	100	16,000

ANALYSES RESULTS

VILLAGE OF BEACHVILLE
WATER POLLUTION SURVEY

SHEET: 3 B

1970

Sampling Point	Description of Sampling Point	5-Day BOD (ppm)	Susp. Solids (ppm)	Total Kjeldahl (ppm)	Total Phosphorus (ppm)	Anionic Detergents as LAS	Faecal Coliform Count per 100 ml.	MF Coliform Count per 100 ml.
TCB156.24	North-west Corner of Spruce Road at Lynn Crescent	15.4	45	2.6	3.5	-	200	1,600,000
		9.4	15	1.2	0.8	-	0	1,000,000
		5.0	20	1.0	1.4	10.5	900	170,000
TD156.24	South-west Corner of Spruce Rd. at Lynn Crescent	3.4	120	0.5	0.6	10.5	40	49,000
TD156.27	West Side on North Section of Spruce Road	9.0	20	1.9	0.25	-	0	2,900
TCB156.3	South Side on North East Section of Spruce Road	12.0	100	1.3	0.4	-	0	240,000
TC156.35	Railroad Bridge 200 yards west of Depot	1.8	0	0.4	10.1	-	14	64
		3.0	5	1.0	0.1	-	600	3,100

VILLAGE OF BEACHVILLE

ANALYSES RESULTS

WATER POLLUTION SURVEY

SHEET: 4 B

1972

Sampling Point	Description of Sampling Point	5-Day BOD (ppm)	Susp. Solids (ppm)	Total Kjeldahl (ppm)	Total Phosphorus (ppm)	Anionic Detergents as LAS	Faecal Coliform Count per 100 ml.	MF Coliform Count per 100 ml.
TC156.4	First Small Creek West of East Zorra Road on Main Street	2.8	0	0.2	L0.1	-	L4	100
		3.8	5	0.6	0.4	-	900	19,000
T 156.4	Thames River at East Zorra Road	9.0	0	1.8	0.7	-	5,200	90,000
		4.8	30	1.0	0.3	-	240	16,000
TS156.4	100 yds. South of Thames River on East Side of East Zorra Road	24	450	2.0	0.3	-	L4	8
TCB156.6	North-West Corner of Martin St. at Queen St. west	18.0	410	0.8	0.2	-	8	100
T _u 156.6	Thames River 10 yds. Downstream of Neilson Co.Ltd.	16.0	750	4.8	0.6	-	700	30,000

VILLAGE OF BEACHVILLE

ANALYSES RESULTS

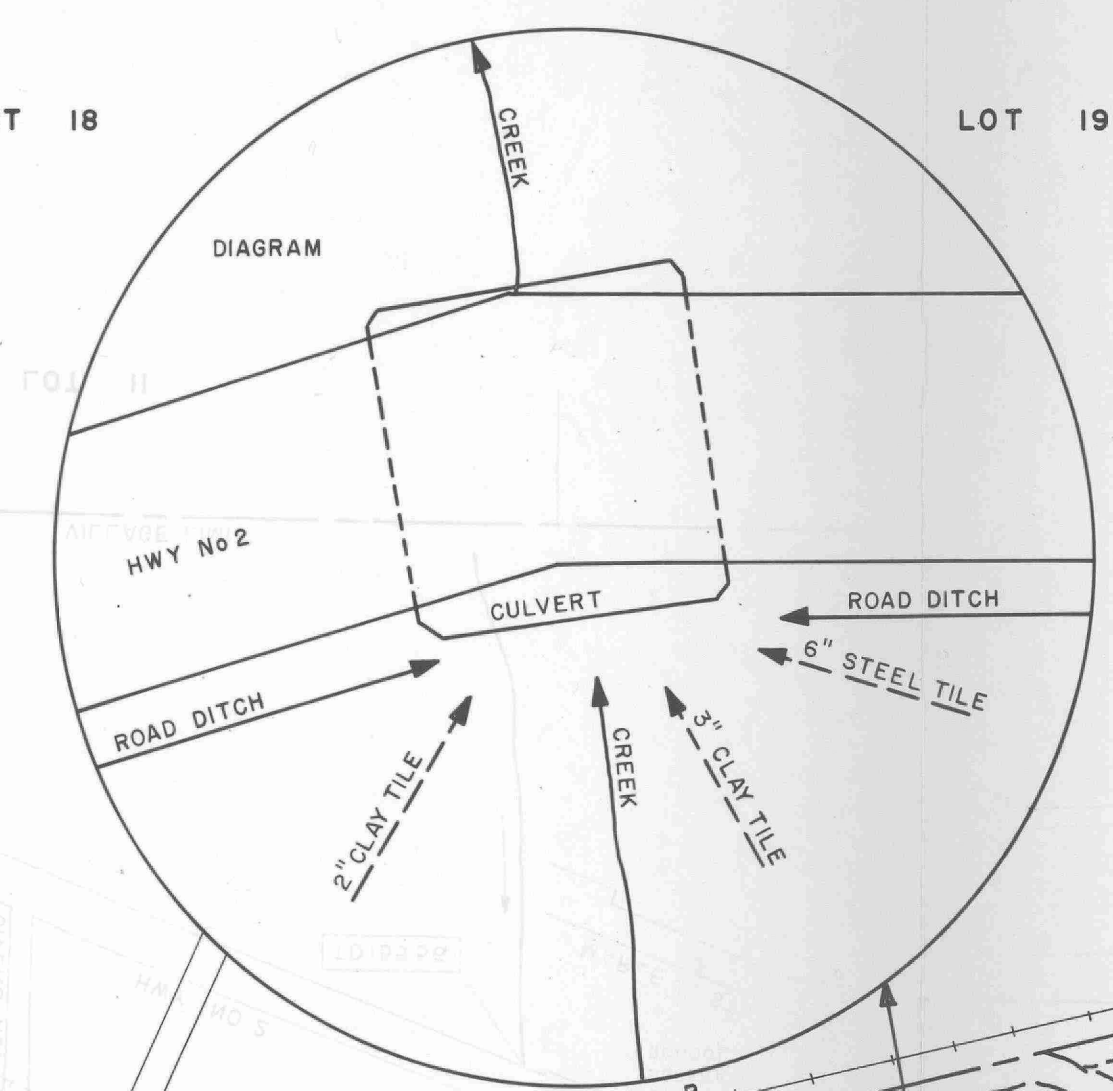
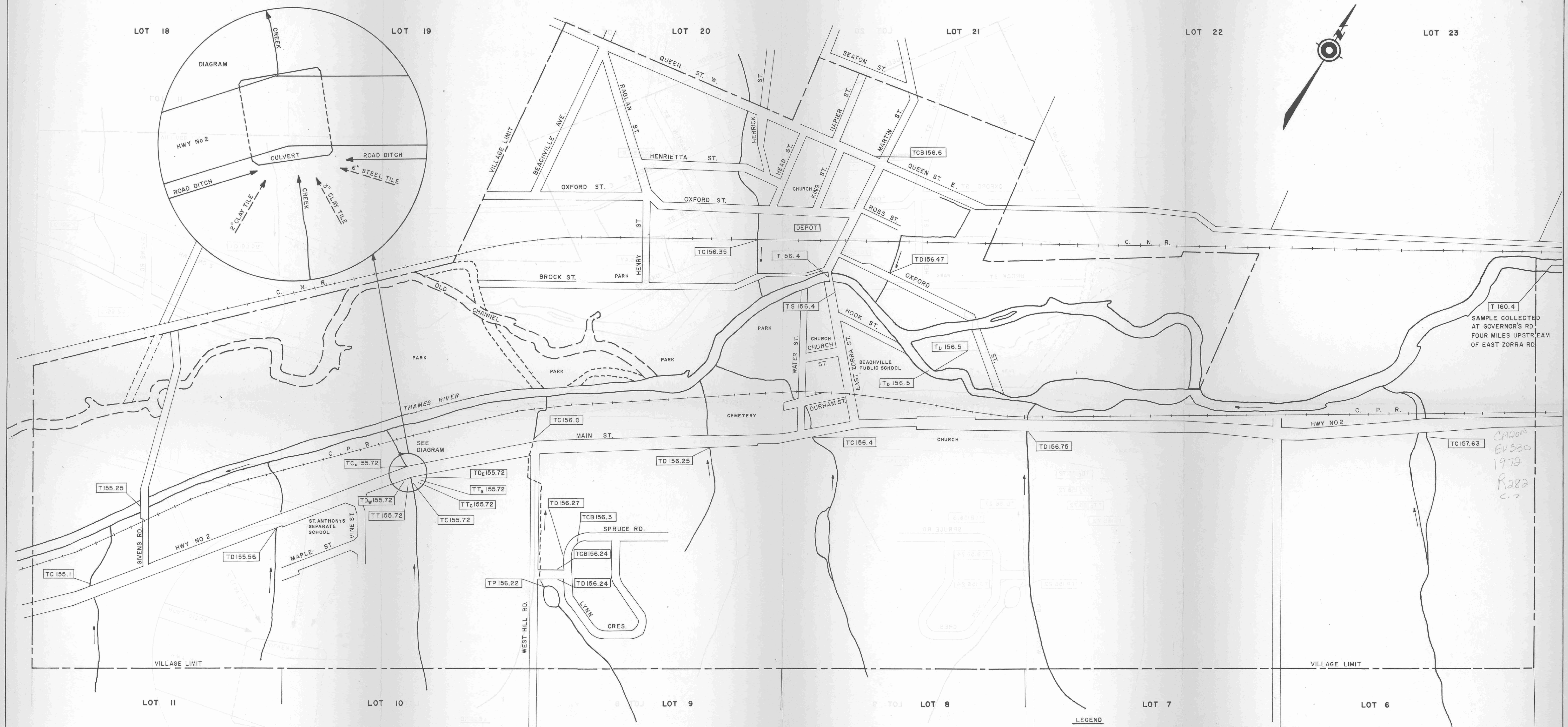
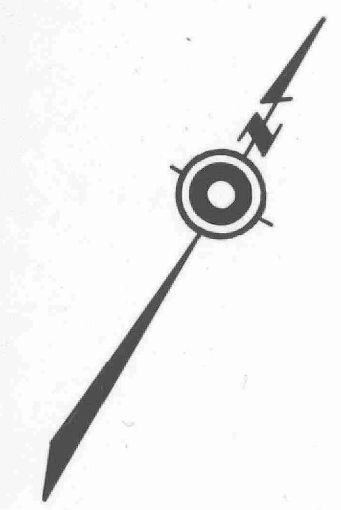
WATER POLLUTION SURVEY

SHEET: 5 B

1972

Sampling Point	Description of Sampling Point	5-Day BOD (ppm)	Susp. Solids (ppm)	Total Kjeldahl (ppm)	Total Phosphorus (ppm)	Anionic Detergents as LAS	Faecal Coliform Count per 100 ml.	MF Coliform Count per 100 ml.
T _d 156.6	Thames River 2 yds. downstream of Neilson Co. Ltd.	11.0	35	2.0	1.1	-	8,000	1,100,000
TC157.56	First Creek West of Commodore Motel at King's Hwy.#2	4.4	5	1.0	0.4	L0.5	6,600	510,000
T160.4	Thames River at Governors Rd. West of Woodstock	4.8	20	1.0	0.4	-	L4	48,000
TD155.56	First Surface Drain West of Vine St.	DRY						
TD156.25	First Surface Drain West of Cemetery	DRY						
TD156.47	First Surface Drain East of Martin St.	DRY						
TD156.75	First Surface Drain East of Church	DRY						

TOWNSHIP OF NORTH OXFORD



T 160.4
SAMPLE COLLECTED
AT GOVERNOR'S RD.
FOUR MILES UPSTREAM
OF EAST ZORRA RD.

CADON
EV530
1972
R282
C.7

LEGEND

T 156.4

SAMPLING CODE

- T
- TC
- TD
- TT
- TS
- TP
- TCB

SAMPLING POINTS SHOWING - ESTIMATED MILEAGE
FROM MOUTH OF THAMES RIVER AND SAMPLING CODE
STORM SEWER

- THAMES RIVER
- SMALL CREEK
- SURFACE DRAIN
- SUBSURFACE TILE DRAIN
- STORM SEWER
- POND
- CATCH BASIN

ENVIRONMENT ONTARIO

VILLAGE OF BEACHVILLE
WATER POLLUTION SURVEY
1972

SCALE: 1"= 400 FT	
DRAWN BY: R.S.	DATE: AUGUST 1972
CHECKED BY:	DRAWING NO: 72-62-DE



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